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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,688	08/07/2001	Bily Wang	Harvatek-9030	8720

7590 05/29/2002
Hung Chang Lin
8 Schindler Court
Silver Spring, MD 20903

EXAMINER

FARAHANI, DANA

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 05/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,688

Applicant(s)

WANG ET AL.

Examiner

Dana Farahani

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 2-4, 6, 9-11, 15, 16, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Sasano (U.S. 6,313,525), previously cited.

Regarding claims 2 and 19, Sasano discloses in figure 1 a method for fabricating a focusing cup for an optoelectronic device package comprising the steps of forming a through hole below layer 9 in an upper insulating substrate; stacking the upper insulating substrate over a lower insulating substrate; and mounting an optoelectronic device 7 on the lower substrate inside the through hole.

Regarding claims 3 and 4, the through hole has larger top than a smaller bottom.

Regarding claims 6 and 18, the optoelectronic device has two top electrodes (not shown in the figure) wire-bonded by wiring 8 respectively to two bonding pads 4 mounted on top of the upper substrate.

Regarding claims 9-11, 15 and 16, the wall of the through hole is covered with metal coating 6 to enhance light reflection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasano as applied to claim 1 above, and further in view of Komoto et al., hereinafter Komoto (U.S. 6,340,824), previously cited.

Regarding claims 7, 14, and 17, Sasano discloses most of the limitations of the claimed invention. Sasano does not disclose a metallic plate between the optoelectronic device and the lower substrate to enhance light reflection. Komoto discloses in figure 122 a total metal reflector RE3 made in a light emitting hole in order to limit the path for releasing light (see column 56, lines 15-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a metal plate, or plurality of metal plates, between device 7 of figure 1 in Sasano's invention in order to limit the path for releasing light.

5. Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasano as applied to claim 8 above, and further in view of Kamizato et al., hereinafter Kamizato (U.S. 5,642,373).

Sasano discloses the limitation in claims 1 and 8. Sasano does not disclose the lead ends are folded. Kamizato discloses in column 5, lines 56-67 that folding the light

generated region gives more power optical output. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to fold the electrodes in order to receive more power output.

Response to Arguments

6. Applicant's arguments filed on 4/10/02 have been fully considered but they are not persuasive.

Regarding rejected claims 1-4, 6, 9-11, 13, and 15-18, the applicant argues that "Sasano discloses in figure 1: "...the steps of forming a through hole below layer 9 in an upper insulating substrate...". This is not what the applicant claims, because claims of this invention all refers to a through hole in the upper layer not below the upper layer". This is not found persuasive, since the through hole in Sasano reference is in fact in the upper layer of the substrate, as shown in figure 1. further, the applicant argues the through hole in Sasano reference is not of conical shape. The Office notes that the hole in Sasano is of conical shape, since according to Merriam-Webster's Collegiate Dictionary , Tenth Edition, conical means "resembling a cone esp. in shape". The hole in Sasano reference resembles a cone shape.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, regarding applicant's argument that "the through hole in Sasano's

figure 4...nor lined with metal coating to increase reflection, and the chip is not mounted on a metal plate to increase reflection", the Komoto reference, combined with Sasano reference, disclose this limitation.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (703)305-1914. The examiner can normally be reached on M-F 9:00AM - 6:00PM.

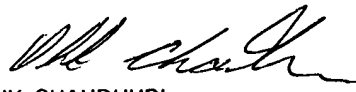
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (703)306-2794. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Dana Farahani
May 23, 2002


OLIK CHAUDHURI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800